Aetiology of multiple sclerosis

When patients are given the news that they have a serious and debilitating condition, one of the questions they ask is ‘what caused this, why me?’ In the case of multiple sclerosis (MS) we can say that while we know that for some patients genetic factors certainly play a role, for many we can only offer broad explanations that allude to multifactorial environmental issues in susceptible individuals. The incidence of MS is increasing worldwide but especially so in the UK; females are more likely to develop the disease. HLA-DR15 serotype confers a significantly higher risk of early onset MS (as well as a variety of other auto-immune conditions) and this may help to explain geographical variation in incidence. However, genetic predisposition cannot by itself be responsible for every case of MS. As with other chronic diseases where autoimmune factors are relevant, it is thought that a double hit hypothesis allows an environmental stimulus to initiate the disease process in individuals with a genetic predisposition. This is the subject of the review by Young which considers some of the environmental factors that have been implicated in the development of MS. Predictably, infectious diseases are the first of these factors to be discussed. In particular, infection with EBV during adult years rather than in childhood is associated with increased risk of developing MS. The disease is more common in populations at higher latitudes and the reasons for this are discussed. The role of sunlight and vitamin D in this association are explored. (I am reminded of the fact that the opposite is true for tuberculosis and where vitamin D is now also thought to play an aetiological role.) Finally, as with many other chronic illnesses lifestyle factors are important and these include obesity and smoking. In summary, the development of MS represents a complex interplay of environmental factors in those individuals who are genetically susceptible to this disease. More work is needed in this area as some of the factors are amenable to lifestyle changes.

HIV testing: a missed opportunity

It is acknowledged that at least 30% of HIV infected individuals are unaware of this fact. For this reason, national guidelines for HIV testing have been developed and these are applicable to all the medical specialties. Furthermore, the guidelines have the endorsement of Medical Royal Colleges and other professional bodies. Physicians are reminded that late diagnosis is the most important factor associated with HIV-related morbidity and mortality in the UK and that patients should therefore be offered HIV testing in a wide range of clinical settings where appropriate. Read and colleagues undertook an audit of all HIV tests performed in 2008 in an inner city area with a high prevalence of this disease. The results were disappointing. While large numbers of HIV screening tests were performed in genito-urinary medicine and antenatal clinics, relatively few tests occurred elsewhere despite the presence of risk factors. This study is similar to numerous others that have been published in the journal that have highlighted an apparent failure of implementation of accepted guidelines in a clinical setting. This is an important issue. It takes many years for the output of research to be translated into clinical practice. Further effort is undertaken by professional organisations to produce guidelines that enable the clinical decision making process. Invariably, when the implementation of these guidelines is audited, it is found that compliance by clinicians is less than optimal. The question is how can clinicians be more engaged in adherence to guidelines? Perhaps one immediate challenge results from the sheer number and variety of clinical guidelines. One hospital had as many as 150 guidelines to deal with commonly encountered clinical situations – it would be unreasonable to expect every physician to be intimately aware of their contents. This issue has been the subject of a review by the New England Healthcare Institute. While written for a North American readership, some of the issues raised are
of general relevance. Increased awareness resulting from educational initiatives is of obvious importance. In addition, clinical IT systems are capable of reminding doctors of context relevant guidance. However, perhaps the main barrier is one of medical culture whereby some clinicians feel that their own judgement and clinical freedom will be constrained by the imposition of national guidance. Furthermore, others hold the view that certain guidelines do not adequately reflect the context in which day to day clinical decisions are made.

Diabetic foot ulceration in community settings

Finally, a study from Scotland that suggests that current guidance on screening for foot complications in people with diabetes who attend community based clinics may need to be altered. Foot ulceration is a significant complication that has a high risk of amputation and other morbidities for diabetic patients. Hence, it makes good sense to robustly screen those patients at risk. The paper from the University of Edinburgh argues that the current criteria for screening is mostly based upon those patients who attend in a hospital setting and who are already more likely to have complications of their disease. Over 1,000 diabetic patients who attended community clinics were screened for foot complications using a standard combination of relevant symptoms, signs and diagnostic tests. The incidence of foot ulceration was 1.93% which is considerably less than that previously reported. The authors reasonably conclude that the rationale for an annual diabetic foot check in low risk, community based patients should be reviewed. Furthermore, foot risk assessment tools to predict ulceration requires further evaluation in terms of effectiveness and cost benefit.

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